



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/537,949	Juergen Sauler	10191/3747

INTERNATIONAL APPLICATION NO.
-------------------------------

PCT/DE03/02407

I.A. FILING DATE	PRIORITY DATE
07/17/2003	12/12/2002

26646  
 KENYON & KENYON LLP  
 ONE BROADWAY  
 NEW YORK, NY 10004

CONFIRMATION NO. 1383

371 ACCEPTANCE LETTER



\*OC000000018110649\*

Date Mailed: 02/23/2006

## NOTICE OF ACCEPTANCE OF APPLICATION UNDER 35 U.S.C 371 AND 37 CFR 1.495

The applicant is hereby advised that the United States Patent and Trademark Office in its capacity as a Designated / Elected Office (37 CFR 1.495), has determined that the above identified international application has met the requirements of 35 U.S.C. 371, and is ACCEPTED for national patentability examination in the United States Patent and Trademark Office.

The United States Application Number assigned to the application is shown above and the relevant dates are:

<u>12/30/2005</u>	<u>12/30/2005</u>
DATE OF RECEIPT OF 35 U.S.C. 371(c)(1), (c)(2) and (c)(4) REQUIREMENTS	DATE OF COMPLETION OF ALL 35 U.S.C. 371 REQUIREMENTS

A Filing Receipt (PTO-103X) will be issued for the present application in due course. **THE DATE APPEARING ON THE FILING RECEIPT AS THE " FILING DATE" IS THE DATE ON WHICH THE LAST OF THE 35 U.S.C. 371 (c)(1), (c)(2) and (c)(4) REQUIREMENTS HAS BEEN RECEIVED IN THE OFFICE. THIS DATE IS SHOWN ABOVE.** The filing date of the above identified application is the international filing date of the international application (Article 11(3) and 35 U.S.C. 363). Once the Filing Receipt has been received, send all correspondence to the Group Art Unit designated thereon.

The following items have been received:

- Copy of the International Application filed on 06/08/2005
- English Translation of the IA filed on 06/08/2005
- Copy of the International Search Report filed on 06/08/2005
- Preliminary Amendments filed on 06/08/2005
- Information Disclosure Statements filed on 06/08/2005
- Oath or Declaration filed on 12/30/2005
- Request for Immediate Examination filed on 06/08/2005
- U.S. Basic National Fees filed on 06/08/2005
- Substitute Specification filed on 06/08/2005
- Priority Documents filed on 06/08/2005

---

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

---

TERRY M JOHNSON VESSELS  
Telephone: (703) 308-9140 EXT 221

PART 3 - OFFICE COPY

FORM PCT/DO/EO/903 (371 Acceptance Notice)

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES  
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges Eigentum  
Internationales Büro



(43) Internationales Veröffentlichungsdatum  
24. Juni 2004 (24.06.2004)

PCT

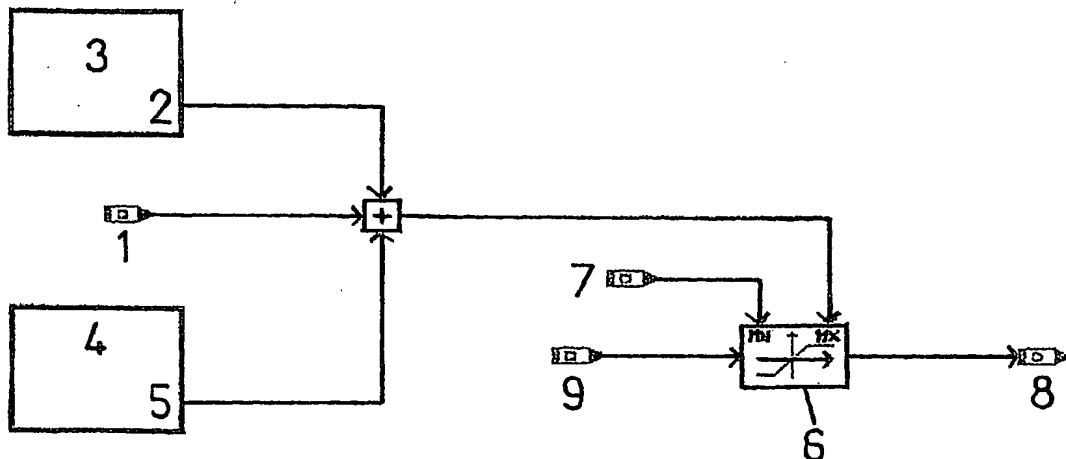
(10) Internationale Veröffentlichungsnummer  
WO 2004/053328 A1

- (51) Internationale Patentklassifikation<sup>7</sup>: F02P 5/152, (72) Erfinder; und  
5/1.15 (75) Erfinder/Anmelder (nur für US): VOLLMER, Martin  
(21) Internationales Aktenzeichen: PCT/DE2003/002407 [DE/DE]; Kaiserslauterer Strasse 64, 70499 Stuttgart-Weil-  
(22) Internationales Anmeldedatum: 17. Juli 2003 (17.07.2003) imdorf (DE). HEINSTEIN, Axel [DE/DE]; Wemtal-  
(25) Einreichungssprache: Deutsch strasse 22, 71299 Wimsheim (DE). KONRAD, Johann  
(26) Veröffentlichungssprache: Deutsch [DE/DE]; Traubenweg 7, 71732 Tamm (DE). SAULER,  
(30) Angaben zur Priorität: 102 57 994.6 12. Dezember 2002 (12.12.2002) DE Juergen [DE/DE]; Am Kochenhof 3, 70192 Stuttgart  
(71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von (DE).  
US): ROBERT BOSCH GMBH [DE/DE]; Postfach 30 02 (74) Gemeinsamer Vertreter: ROBERT BOSCH GMBH;  
20, 70442 Stuttgart (DE). Postfach 30 02 20, 70442 Stuttgart (DE).  
(81) Bestimmungsstaaten (national): CN, JP, KR, US.  
(84) Bestimmungsstaaten (regional): europäisches Patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

[Fortsetzung auf der nächsten Seite]

(54) Title: METHOD FOR DETERMINING THE ANGLE OF IGNITION

(54) Bezeichnung: VERFAHREN ZUR ZÜNDWINKELBESTIMMUNG



(57) Abstract: The invention relates to a method for determining the angle of ignition whereby the modifications of the adjusted variables, which can have an influence on the knock limit and therefore on the optimal angle of ignition, are considered in a dynamic manner. A base ignition angle (1) is initially determined from the current motor speed and load. Then, a first ignition angle adjustment (2) is determined in later mode as part of a downstream knocking control (3) if a knock has been detected. According to the invention, a second ignition angle (5) is determined as part of a knocking limit control (4) if at least one adjusted variable influencing the knocking limit is modified. The nature of the second ignition angle (5), i.e. in earlier or later mode, is dependent on the adjusted variable and the modification thereof.

(57) Zusammenfassung: Es wird ein Verfahren zur Zündwinkelbestimmung vorgeschlagen, bei dem Änderungen von Stellgrößen, die sich auf die Klopfgrenze und damit auf den optimalen Zündwinkel auswirken, dynamisch berücksichtigt werden. Dazu wird zunächst ausgehend von der aktuellen Motordrehzahl und Last ein Grundzündwinkel (1) bestimmt. Dann wird im Rahmen einer nachgeschalteten Klopfregelung (3) eine erste Zündwinkelverstellung (2) nach spät ermittelt, wenn ein Klopfen erkannt worden

[Fortsetzung auf der nächsten Seite]